

Reply to Office Action dated February 19, 2008

**REMARKS**

Claims 1, 3, 5, 8-15 and 18-21 are pending in this application. By this Amendment, claims 10, 12, 19 and 21 are amended. Various amendments are made for clarity and are unrelated to issues of patentability.

The Office Action appears to reject claims 19 and 21 under 35 U.S.C. §112, second paragraph. It is respectfully submitted that the above amendments to claims 19 and 21 obviate the grounds for rejection. Withdrawal of the rejection is respectfully requested.

The Office Action rejects claims 1, 3 and 14-15 under 35 U.S.C. §102(b) by U.S. Patent 5,754,155 to Kubota et al. (hereafter Kubota). The Office Action also rejects claim 5 under 35 U.S.C. §103(a) over Kubota in view of U.S. Patent 6,756,958 to Furuhashi et al (hereafter Furuhashi). Still further, the Office Action rejects claims 18-21 under 35 U.S.C. §103(a) over Kubota in view of U.S. Patent 6,118,425 to Kudo. The Office Action also rejects claims 8-13 under 35 U.S.C. §103(a) over Kubota in view of Kudo and U.S. Patent 5,786,794 to Kishi et al. The rejections are respectfully traversed with respect to the pending claims.

Independent claim 1 recites a scan driving unit for controlling an upper voltage value and a lower voltage value which are applied to an Integrated Circuit (IC) for driving a scan electrode of a flat display panel. Independent claim 1 also recites that the scan driving unit comprises a timing control unit for outputting a timing control signal, an upper voltage generating unit for outputting the upper voltage value, a lower voltage generating unit for outputting the lower voltage value, and an amplifying unit for amplifying the upper voltage value applied to the scan driving unit to a predetermined level, wherein the scan driving unit selectively outputs one of the

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amplified upper voltage value and the lower voltage value on the basis of the timing control signal.

The applied references do not teach or suggest all the features of independent claim 1. More specifically, Kubota does not teach or suggest that the scan driving unit selectively outputs one of the amplified upper voltage value and the lower voltage value on the basis of the timing control signal, as recited in independent claim 1. See, for example, FIG. 3 of the present specification showing a non-limiting example of an upper voltage generating unit 310 coupled to an amplifying unit 320 (prior to being coupled to a scan driving IC 145) and a lower voltage generating unit 330. See also page 7, lines 8-16 of the present specification. In the non-limiting example described in the present specification, only the upper voltage value is amplified (without amplifying the lower voltage value). Thus, one of the lower voltage values (i.e., the not amplified value) and the amplified upper voltage value is selectively outputted based on a timing control signal.

Kubota discloses that a reference voltage  $V_G$  is respectively amplified by shift circuits 15a, 15b and one of the amplified  $V_{GL}$  and  $V_{GH}$  is output. Kubota is configured to selectively output one of the  $V_{GL}$  and the  $V_{GH}$  that are respectively amplified from the reference voltage  $V_G$ . See Kubota's FIG. 4 and col. 9, lines 4-11 and col. 9, line 61-col. 10, line 4. Kubota does not teach or suggest that a scan driving unit selectively outputs one of an amplified upper voltage value and the lower voltage value on the basis of the timing control signal, as recited in independent claim 1.

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The Office Action (on page 4) appears to cite Kubota's col. 3, lines 34-46 for features relating to a timing control signal. However, the cited section does not relate to selectively outputs one of the amplified upper voltage value and the lower voltage value.

For at least the reasons set forth above, Kubota does not teach or suggest the features as alleged in the Office Action. The other applied references do not teach or suggest the features of independent claim 1 missing from Kubota. Thus, independent claim 1 defines patentable subject matter.

Independent claim 14 recites a scan driving unit to control an upper voltage value and a lower voltage value to be applied to a circuit for driving a scan electrode of a flat display panel, wherein the scan driving unit includes a timing control unit for outputting a timing control signal, an upper voltage generating unit for outputting the upper voltage value, a lower voltage generating unit for outputting the lower voltage value, and an amplifying unit for converting the upper voltage value applied to the scan driving unit to a current and amplifying the current to a predetermined level. Independent claim 14 also recites the scan driving unit selectively outputs the amplified current or the lower voltage value based on the timing control signal.

For at least similar reasons as set forth above, Kubota does not teach or suggest that the scan driving unit selectively outputs the amplified current or the lower voltage value based on the timing control signal, as recited in independent claim 14. The other applied references do not teach or suggest the features of independent claim 14 missing from Kubota. Thus, independent claim 14 defines patentable subject matter.

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Accordingly, each of independent claims 1 and 14 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

### **CONCLUSION**

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1, 3, 5, 8-15 and 18-21 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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**Date: May 12, 2008**